

## REMARKS

### I. Claim Amendments

With this response, claims 14, 16, 17, 20, 24, 25, 29 and 31 are amended and claims 15, 18 and 28 are cancelled without prejudice. Support for amendments to claim 14 are discussed below. Support for amendments to claim 16 are supported, *inter alia*, at page 10, line 8; page 15, line 6; page 16, lines 10-21 of the specification as filed. Support for amendments to claims 17, 24 and 25 are the same as for claim 14 which are discussed below. Support for amendments to claim 20 are supported by original claim 3. Support for amendments to claim 29 are supported, *inter alia*, at page 16, lines 12-13 of the specification as filed. Support for amendments to claim 31 are supported, *inter alia*, at page 9, lines 7-11 of specification as filed.

### II. 35 USC 112

The Examiner contends that claims 14-32 are rejected under 35 USC 112, first paragraph, as failing to comply with the written description requirement. At page 3 of the Office Action, the Examiner contends that support for *a method of determining an organism, the method comprising assaying a plurality of enzymes with a plurality of sensors to determine a suite of enzymes expressed by the organism* is not found in the originally filed claims or specification. The Applicant respectfully traverses this rejection as follows.

With reference to MPEP 2163 "Written Description Requirement", the Applicant recites the following:

*"To comply with the written description requirement of 35 USC 112, para. 1,... each claim limitation must be expressly, implicitly, or inherently supported in the*

*originally filed disclosure."*

The Applicant has amended claim 14 as follows:

A method for determining an organism, the method comprising assaying a plurality of enzymes with a ~~plurality of~~ sensor[[s]] to determine a suite of enzymes expressed by the organism, and thus determining said organism; ~~each of said plurality of~~ the sensor[[s]] comprising: a substrate; ~~at least one~~ more than one pair of electrodes; a sol gel matrix comprising: ~~at least~~ more than one sol-gel enzyme; at least one reactant; and at least one inherently conductive polymer transducer material, wherein each of the more than one sol-gel enzymes are dispersed in the sol-gel matrix and the sol-gel matrix covers the electrodes; wherein (a) an organism expresses [[an]] at least one organism-enzyme on the surface of the sensor; (b) the at least one organism-enzyme causes a reaction with the at least one reactant of the sensor; (c) the product according to process step (b) reacts further ~~as catalyzed by~~ with said more than one sol-gel enzyme of the sensor; (d) the products of process step (c) modulate at least one property of the transducer material; (e) and the modulated property is measured.

In view of the Written Description Requirement, the Applicant notes that:

"assaying a plurality of enzymes with a ~~plurality of~~ sensor[[s]] to determine a suite of enzymes expressed by the organism, and

*thus determining said organism"* is supported at page 5, line 24 to page 6, line 2; and page 7, lines 1-4. This feature is further supported implicitly in the specification at page 2, line 19, where it is discussed that a sensor for one process [of an organism] is not desired.

"the sensor comprising: a substrate; ~~at least one~~ more than one pair of electrodes; a sol gel matrix comprising: ~~at least~~ more than one sol-gel enzyme; at least one reactant; and at least one inherently conductive polymer transducer material..." is supported at page 6, lines 2-9 and Figures 1, 1A and 2, wherein Figures 1 and 2 show the sol-gel enzyme 5 clearly as four distinct enzymes, thus disclosing more than one sol-gel enzyme 5 on the disclosed sensor 1. Figures 1 and 2 show a series of electrodes 3, at least one transducer material 6 and at least one reactant 7. Figure 1A shows the interdigitated pairs of electrodes. Inherently conductive polymer transducer material is supported, *inter alia*, by cancelled claim 28 and previously presented claim 31.

In addition, the Applicant notes that "at least one" is accepted in practice to also mean "more than one". Thus, the Applicant submits that as clearly disclosed in the originally filed application "at least one enzyme" (e.g. page 6, line 7) can refer to "more than one enzyme" as presently claimed. In view of this disclosure of more than one sol-gel enzyme in the text of the specification in combination with the distinct enzymes 5 shown in Figures 1 and 2, the Applicant submits that the present application as filed supports a sensor having more than one sol-gel enzyme as recited in amended claim 14.

"wherein each of the more than one sol-gel enzymes are dispersed in the sol-gel matrix and the sol-gel matrix covers the electrodes;..." is supported, *inter alia*, at page 10, lines 1-13.

In view of the above, the Applicant submits that claim 14 as amended herein is proper under 35 USC 112, first paragraph for fulfilling the requirement for Written Description. The Examiner's rejections to claims 14-32 were applied only to claim 14. Thus, as discussed, amended claim 14 is proper. With this response, claims 15, 18 and 28 are cancelled, thus obviating any rejection to these claims. Dependent claims 16-17; 19-27 and 29-32 are also proper under 35 USC 112, first paragraph, as they do not contain any features rejected by the Examiner that are not found in claim 14. The Applicant respectfully requests withdrawal of the rejection of the pending claims under 35 USC 112, first paragraph.

### **III. Conclusion**

The Applicant submits that this response addresses all of the Examiner's rejections and places the application in condition for allowance.

\* \* \* \* \*

The Commissioner is authorized to charge any additional fees that may be required or credit overpayment to deposit account no. 12-0415. In particular, if this response is not timely filed, the Commissioner is authorized to treat this response as including a petition to extend the time period pursuant to 37 CFR §1.136(a) requesting an extension of time of the number of months necessary to make this response timely filed, and the petition fee due in connection therewith may be charged to deposit account no. 12-0415.

I hereby certify that this paper (and any enclosure referred to in this paper) is being transmitted electronically to the United States Patent and Trademark Office on

Respectfully submitted,

\_\_\_\_\_  
January 14, 2008

(Date of Transmission)

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Enclosures: RCE petition  
Petition for a 1-month extension